

Faculty/Student Team Utilizes Modeling and Visualization to Create Virtual Map of Hell's Canyon

NSF Highlights— Track 2: Workforce Development



Students collect water samples from Hells Canyon for their research projects.

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Outcome: Hells Canyon Institute is an interdisciplinary capstone course for Lewis-Clark State College's general education program. The course, which is co-taught by a team of two instructors and one student, incorporates visualization and modeling exercises into the course, allowing participants to explore the varied dimensions of Hells Canyon through multiple lenses including botany, chemistry, geology, anthropology, history, and literature.

As an introductory course, most students have no prior experience with mapping or visualization tools. Students are introduced to mapping tools to use as a method to convey their research findings to a broader public.

Impact/Benefits: Hells Canyon is the deepest gorge in North America, however, very few people have the opportunity to experience the canyon first hand due to its remoteness and limited access. Hells Canyon Institute provides students with the opportunity to not only visit the canyon, but to contribute to ongoing research about the canyon's unique ecosystem and history.

Explanation: The Western Consortium Watershed Analysis, Visualization and Exploration (WC-WAVE) project is a collaborative effort of the Idaho, New Mexico and Nevada NSF EPSCoR Programs. Its overarching goal is to advance watershed science, workforce development, and education with cyberinfrastructure (CI)-enabled discovery and innovation. The Undergraduate Visualization and Modeling Network (UVMN) provides professional development for instructors (faculty) and students from Primarily Undergraduate Institutions (PUI) in the three consortium states by providing an opportunity to engage diverse students in undergraduate research and CI-enabled education. Faculty and student teams from each state participate in workshops focusing on modeling and visualization and work collaboratively to develop and implement educational models at their home institutions.

Highlight provided by Sarah Penney, University of Idaho, sarahp@uidaho.edu / Photo provided by Jenni Light, Lewis Clark State College, jlight@lcsc.edu